

procedure, including myocardial infarction (MI), cardiac death, and target vessel revascularization (TVR).

Results: The NERS score II system consisted of 16 (7 clinical and 9 angiographic) variables. An NERS score ≥ 19 demonstrated enhanced MACE sensitivity and specificity of 84.0% and 76.0% (MACE as the state variable), respectively, which were similar to the NERS score but significantly higher compared to the SYNTAX score. An NERS II score ≥ 19 was the only independent predictor of cumulative MACEs (hazard ratio: 3.27; 95% CI: 1.86 to 5.23; $p \leq 0.001$) and stent thrombosis (odds ratio: 22.15; 95% CI: 12.47 to 57.92; $p \leq 0.001$) at follow-up.

Conclusions: The NERS score II, similar to the conventional NERS score, is more predictive of MACEs than the SYNTAX score in UPLMCA patients after implantation of a DES.

TCT-400

Everolimus-Eluting Stent and Dedicated 2-Stent Strategy in Complex ‘True’ Bifurcation Lesion with Major Side Branch Involvement

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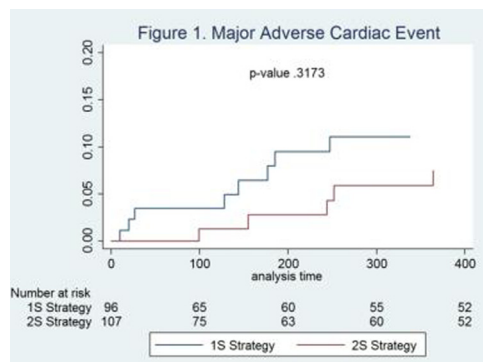
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Background: Percutaneous coronary intervention (PCI) of complex true coronary bifurcation lesions is challenging and whether to stent side branch dedicatedly is still debatable. To date there is no published study showing the safety and efficacy of the Everolimus-eluting stent (EES) in true bifurcation lesions with major side branch (SB) involvement treated with dedicated 2 stents (2S). We sought to compare outcomes of a dedicated 2S with a provisional 1S strategy in these unique patients.

Methods: We identified 203 patients with complex true bifurcation lesions (Medina: 1,1,1; 1,0,1; and 0,1,1) with a minimum SB diameter of ≥ 2.3 mm (assessed by quantitative coronary angiography) who underwent bifurcation PCI using EES from February 2010 to December 2011. The PCI strategies included provisional 1S (n=96) and dedicated 2S (n=107) technique. Survival curves were constructed for time-to-event variables with Kaplan-Meier methodology and compared by log-rank test.

Results: The baseline characteristics were well matched between two PCI strategies. In hospital major adverse cardiac event (MACE) and post procedure MI (CK-MB $> 3 \times$ Normal) (10.42% provisional stent vs. 7.48% 2-Stent implantation, $P=0.46$). At 1-year follow-up, MACE rates were similar for both (2S vs. 1S) techniques. Time to MACE event analysis is depicted with log rank test ($P=0.31$).

Conclusions: With EES use, a dedicated 2S technique appears to be a safe and effective PCI strategy in patients with complex true bifurcation lesion with large side branch vessel involvement.



TCT-401

Long Term Follow Up of Patients Undergoing Distal Left Main-Bifurcation Stenting via Transradial versus Femoral Approach

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Background: The present study aimed to compare the immediate success and long-term follow up between the femoral (TF) and transradial (TR) approach for stenting of unprotected distal left main (LM) bifurcation lesions.

Methods: 412 consecutive patients with distal LM bifurcation lesions underwent stent implantation (226 in the transradial group and 186 in femoral group) were enrolled. The primary endpoint was major adverse cardiac events (MACE), a composite of cardiac death, myocardial infarction, and target vessel revascularization. In hospital mortality and bleeding, follow up MACE were compared according to vascular access method.

Results: Clinical and angiographic characteristics (Syntax score) were similar between groups. 6Fr catheter were more commonly used in TR (100%, TF 15%). 2 stents technique were less commonly used in TR (32% vs 51% $P < 0.01$). All patients were implanted with drug eluting stents. For TR patients, bifurcation stent technique included Culotte (40%), modified crush (35%), T stent (25%), For TF patients, bifurcation strategies were crush (60%), T stenting (17%), Culotte (17%) and kissing or V stenting (6%). Use of intravascular ultrasound were also similar between two access (40% versus 36% $p=0.42$). No cross over between 2 groups. No significant differences were observed between TR and TF methods for procedural success (92% TR vs. 96% TF, $p=0.24$) or total procedural time. However, duration of hospital stay and in-hospital occurrence of major or minor bleeding (1.6% vs. 3.5%, $p < 0.01$) were significantly lower with TR access. In hospital mortality rate is similar (TR 0.8% vs. TF 2.1% $p=0.28$). Over a median follow-up period of 36 months, rates of MACE did not statistically differ among TR and TF groups (10.6%, vs. 11.8% $p=0.69$). Cox regression showed that two stent (OR 1.21 95%CI 1.05 – 5.12 $p < 0.01$) but not access route were negative predictive factor for MACE.

Conclusions: TR access for LM bifurcation stenting is not inferior to TF in term of efficacy and long term follow-up but associated with decreased rate of bleeding.

TCT-402

The Efficacy of a “Reversed Wire Technique” for Treating Bifurcation Lesions in Percutaneous Coronary Intervention – “Tips & Tricks” for salvaging the side branch -

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Background: An acute side branch occlusion after stent implantation due to unsuccessful wire-crossing of the side branch could induce myocardial damage and contribute to poor long term outcomes. However, the necessary wiring to cross extremely angulated bifurcation is distressed.

Methods: The aim of this study was to evaluate the safety and feasibility of a “Reversed Wire Technique [RWT]” for treating bifurcation lesions in PCI. This technique requires hydrophilic-coated wire with a hairpin bend curve at the tip and a double lumen microcatheter.

Results: Of 3,847 consecutive lesions treated with PCI from Aug 2009 to May 2013, RWT was used in 21 cases including 7 CTO cases. Of 18 bifurcation lesions treated with RWT, 18 cases had previous failed attempts of wiring to the side branch via regular methods (The mean number of used wire before RWT was 1.7 ± 0.9). The bifurcation lesions treated with RWT were most frequently located in the left anterior descending artery (57%) followed by the left circumflex artery (24%), and the right coronary artery (19%). The mean angle between the main-vessel and the side-branch was 131 ± 21 degrees. Successful wire crossing was achieved in 81% of cases. All cases using RWT underwent kissing-balloon inflation after wire-crossing. The patency of the side-branch immediately after the procedure was 100%, if RWT was successful.

Conclusions: The RWT is a useful method for the salvage of extremely angulated bifurcation lesions and for eliminating wasted wire, although this technique required several “Tips and Tricks”. This technique also can be applied to CTO procedure.